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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,464	05/24/2004	Takeshi Sakamoto	118870	9230

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EXAMINER	
WONG, EDNA	
ART UNIT	**PAPER NUMBER**
1753	

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/788,464	SAKAMOTO ET AL.	
	Examiner	Art Unit	
	Edna Wong	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

This is in response to the Amendment dated May 8, 2006. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments

Claim Objections

Claims **1-10, 12-16 and 18-22** have been objected to because of minor informalities.

The objection of claims 1-10, 12-16 and 18-22 has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 102

I. Claims **17-19 and 21** have been rejected under 35 U.S.C. 102(b) as being anticipated by **JP 50-118930** ('930).

The rejection of claims 17-19 and 21 under 35 U.S.C. 102(b) as being anticipated by JP 50-118930 ('930) has been withdrawn in view of Applicants' amendment. Claims 17-19 and 22 have been canceled.

II. Claim **22** has been rejected under 35 U.S.C. 102(b) as being anticipated by **JP 50-118930** ('930).

The rejection of claim 22 under 35 U.S.C. 102(b) as being anticipated by JP 50-

118930 ('930) has been withdrawn in view of Applicants' amendment. Claims 21 has been canceled.

Claim Rejections - 35 USC § 103

I. Claims **1-8** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Hamamura et al.** (US Patent No. 4,959,273) in combination with **Lowenheim** ("Electroplating", © 1978, pp. 212-213) and **Du Rose et al.** (US Patent No. 3,183,067).

The rejection of claims 1-8 under 35 U.S.C. 103(a) as being unpatentable over Hamamura et al. in combination with Lowenheim and Du Rose et al. has been withdrawn in view of Applicants' amendment.

II. Claims **9 and 10** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Hamamura et al.** (US Patent No. 4,959,273) in combination with **Lowenheim** ("Electroplating", © 1978, pp. 212-213) and **Du Rose et al.** (US Patent No. 3,183,067).

The rejection of claims 9 and 10 under 35 U.S.C. 103(a) as being unpatentable over Hamamura et al. in combination with Lowenheim and Du Rose et al. has been withdrawn in view of Applicants' amendment.

III. Claims **11-15** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Hamamura et al.** (US Patent No. 4,959,273) in combination with **Lowenheim**

("Electroplating", © 1978, pp. 212-213).

The rejection of claims 11-15 under 35 U.S.C. 103(a) as being unpatentable over Hamamura et al. in combination with Lowenheim has been withdrawn in view of Applicants' amendment.

IV. Claim **16** has been rejected under 35 U.S.C. 103(a) as being unpatentable over **Hamamura et al.** (US Patent No. 4,959,273) in combination with **Lowenheim** ("Electroplating", © 1978, pp. 212-213).

The rejection of claim 16 under 35 U.S.C. 103(a) as being unpatentable over Hamamura et al. in combination with Lowenheim has been withdrawn in view of Applicants' amendment.

V. Claim **20** has been rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 50-118930** ('930) as applied to claims 17-19 and 21 above, and further in view of **Lowenheim** ("Electroplating", © 1978, pp. 212-213).

The rejection of claim 20 under 35 U.S.C. 103(a) as being unpatentable over JP 50-118930 ('930) as applied to claims 17-19 and 21 above, and further in view of Lowenheim has been withdrawn in view of Applicants' amendment. Claim 20 has been canceled.

Response to Amendment

Claim Rejections - 35 USC § 102

Plating Bath

I. Claims **11-15** are rejected under 35 U.S.C. 102(b) as being anticipated by **Jozefowicz** (US Patent No. 5,167,793).

Jozefowicz teaches a plating bath, comprising:

(a) a nickel source (= nickel sulphate heptahydrate);

(b) a conductive salt (= ammonium sulphate);

(c) a pH stabilizer (= boric acid); and

wherein the concentration of the nickel source is 0.3 mol/l to 0.7 mol/l on the nickel atom basis (= 25 g/l nickel sulphate heptahydrate), and

the conductivity of the plating bath is 80 mS/cm or over (*inherent*) [= a standard ANOLOK solution] (col. 9, lines 40-45; and MPEP § 2112.01(II)).

The nickel source is selected from the group consisting of nickel sulfate, nickel chlorides, nickel bromides, nickel acetate and nickel pyrophosphate (= nickel sulphate heptahydrate) [col. 9, lines 40-45].

The conductive salt is selective the group consisting of ammonium sulfate, sodium sulfate, potassium sulfate, lithium sulfate, magnesium sulfate, ammonium chloride, sodium chloride, potassium chloride, lithium chloride, magnesium chloride, ammonium bromide, sodium bromide, potassium bromide, lithium bromide and magnesium bromide (= magnesium sulphate heptahydrate and ammonium sulphate) [col. 9, lines 40-45].

The pH stabilizer is selected from the group consisting of boric acid, ammonium borate, sodium borate, potassium borate, lithium borate, magnesium borate and ammonia (= boric acid) [col. 9, lines 40-45].

As to wherein the plating bath is used to form a protective film on a magnet body including a rare-earth element by electroplating, as recited in claim 12, this limitation is not a component of the plating bath, and thus, fails to distinguish the plating bath from the prior art.

Since Jozefowicz teaches all of the limitations recited in the instant claims, the reference is deemed to be anticipatory.

II. Claim **16** is rejected under 35 U.S.C. 102(b) as being anticipated by **Jozefowicz** (US Patent No. 5,167,793).

Jozefowicz teaches a plating bath, comprising:

(a) 0.3 mol/l to 0.7 mol/l of nickel ions (= 25 g/l nickel sulphate heptahydrate);

(b) at least one kind of ion selected from the group consisting of sulfate ions, chlorine ions, bromine ions, acetate ions and pyrophosphate ions (= magnesium sulphate heptahydrate and ammonium sulphate);

(c) at least one kind of ion selected from the group consisting of sodium ions, potassium ions, lithium ions, magnesium ions and ammonium ions (=

magnesium sulphate heptahydrate and ammonium sulphate); and

(d) at least one kind of ion selected from the group consisting of borate ions and ammonium ions (= ammonium sulphate and boric acid) [col. 9, lines 40-45],

wherein the conductivity of the plating bath is 80 mS/cm or over (*inherent*) [= a standard ANOLOK solution] (col. 9, lines 40-45; and MPEP § 2112.01(II)).

Since Jozefowicz teaches all of the limitations recited in the instant claims, the reference is deemed to be anticipatory.

Claim Rejections - 35 USC § 103

Method

I. Claims **1-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Du Rose et al.** (US Patent No. 3,183,067) in combination with **Hamamura et al.** (US Patent No. 4,959,273), and **Lowenheim** ("Electroplating", © 1978, pp. 212-213).

Du Rose teaches a method of manufacturing a rare-earth magnet, comprising the steps of:

(a) electroplating a first protective film including nickel (= the first or underlying layer of nickel) [col. 2, lines 20-23] on a metal body (col. 5, lines 46-53) with a first plating bath including:

(i) a nickel source (= nickel sulfate);

(ii) a conductive salt (= nickel chloride);

(iii) a pH stabilizer (= boric acid); and

having a concentration of the nickel source of 0.3 mol/l to 0.7 mol/l on a nickel atom basis (= 30 g/l nickel sulfate) [col. 3, solution (*h*)].

(b) forming a second protective film including nickel and sulfur on the first protective film (= a second or top layer of nickel) [col. 2, lines 23-28; and col. 3, Table 1, Combination 12; and col. 4, solution (*o*)].

The nickel source is selected from the group consisting of nickel sulfate, nickel chlorides, nickel bromides, nickel acetate and nickel pyrophosphate as the nickel source is used (= nickel sulfate) [col. 3, solution (*h*)].

The pH stabilizer is selected from the group consisting of boric acid, ammonium borate, sodium borate, potassium borate, lithium borate, magnesium borate and ammonia is used (= boric acid) [col. 3, solution (*h*)].

The second protective film is formed by electroplating with a second plating bath including:

(i) a nickel source (= nickel sulfate);

(ii) a conductive salt (= nickel chloride);

(iii) a pH stabilizer (= boric acid); and

(iv) an organic sulfur compound (col. 1, lines 55-58; and col. 5, lines 53-61), and having a concentration of the nickel source of 0.3 mol/l to 0.7 mol/l on a nickel atom basis (= 30 g/l nickel sulfate) [col. 4, solution (*o*)].

The nickel source is selected from the group consisting of nickel sulfate, nickel

chlorides, nickel bromides, nickel acetate and nickel pyrophosphate (= nickel sulphate heptahydrate) [col. 4, solution (*o*)].

The pH stabilizer is selected from the group consisting of boric acid, ammonium borate, sodium borate, potassium borate, lithium borate, magnesium borate and ammonia is used (= boric acid) [col. 4, solution (*o*)].

The method of Du Rose differs from the instant invention because Du Rose does not disclose the following:

a. Wherein the metal body is a magnet body including a rare-earth element, as recited in claim 1.

Du Rose teaches that he has discovered that uniformly corrosion resistant duplex nickel coated articles may be obtained by controlling the amounts of sulfur contained in both of the nickel coatings making up the duplex deposit. (col. 1, line 35-47). The corrosion resistant article may have a basis metal any metal which is *subject to atmospheric corrosion*. Preferably, the basis metal is a metal selected from the group consisting of aluminum, *iron*, copper and zinc and alloys thereof (col. 1, line 58 to col. 2, line 60).

Like Du Rose, Hamamura teaches the production of corrosion resistant nickel-plated metallic articles. Hamamura teaches that a permanent magnet formed by the Fe-B-R type magnetically anisotropic sintered body, while exhibiting excellent magnetic properties, has the contents of the rare earth elements and *iron*, *that are apt to be*

oxidized in air to form gradually stable oxides, as the main constituents, so that when the magnet is assembled in the magnetic circuit, various problems may be invited due to the oxides formed on the magnet, such as decreased output of the magnetic circuit, fluctuations in the operation of various peripheral devices around the magnetic circuits due to scaling off of the resultant oxides from the magnetic surface (col. 1, line 61 to col. 2, line 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the metal body described by Du Rose with wherein the metal body is a magnet body including a rare-earth element because electroplating a magnet body including a rare-earth element with duplex nickel deposits would have given increased corrosion protection as taught by Du Rose (col. 1, lines 35-47) and Hamamura (col. 1, line 61 to col. 2, line 6).

b. Wherein the first plating bath has a conductivity of 80 mS/cm or over, as recited in claim 1.

c. Wherein the second plating bath has a conductivity of 80 mS/cm or over, as recited in claim 5.

Du Rose teaches a similar chemical composition as presently claimed. Similar chemical compositions can reasonably be expected to have the similar properties. (MPEP § 2112.01(II)).

d. Wherein the conductive salt is selective the group consisting of ammonium sulfate, sodium sulfate, potassium sulfate, lithium sulfate, magnesium sulfate, ammonium chloride, sodium chloride, potassium chloride, lithium chloride, magnesium chloride, ammonium bromide, sodium bromide, potassium bromide, lithium bromide and magnesium bromide, as recited in claim 3.

e. Wherein the conductive salt is selective the group consisting of ammonium sulfate, sodium sulfate, potassium sulfate, lithium sulfate, magnesium sulfate, ammonium chloride, sodium chloride, potassium chloride, lithium chloride, magnesium chloride, ammonium bromide, sodium bromide, potassium bromide, lithium bromide and magnesium bromide, as recited in claim 7.

Du Rose teaches that the nickel will be deposited from a solution, Watts or otherwise (col. 2, lines 21-22; and cols. 3-4).

Like Du Rose, Lowenheim teaches a Watts bath (page 212-213). The *nickel sulfate* provides most of the nickel ion content and the *nickel chloride* is used as the source of chloride ion, required to prevent anode passivity. Besides nickel chloride, other chlorides would have served this function, such as sodium, potassium, and ammonium (page 212).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the conductivity salt described by Du Rose with wherein the conductive salt is selective the group consisting of ammonium sulfate, sodium sulfate, potassium sulfate, lithium sulfate, magnesium sulfate, ammonium

chloride, sodium chloride, potassium chloride, lithium chloride, magnesium chloride, ammonium bromide, sodium bromide, potassium bromide, lithium bromide and magnesium bromide because sodium chloride, potassium chloride and ammonium chloride would have been functionally equivalent to nickel chloride as taught by Lowenheim (page 212).

II. Claims **9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Du Rose et al.** (US Patent No. 3,183,067) in combination with **Hamamura et al.** (US Patent No. 4,959,273), and **Lowenheim** ("Electroplating", © 1978, pp. 212-213).

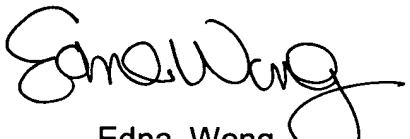
Du Rose, Hamamura and Jozefowicz are as applied for reasons as discussed above and incorporated herein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Edna Wong
Primary Examiner
Art Unit 1753

EW
June 18, 2006